

- Standing on the prosthesis only, apply a bouncing action to the toe of the prosthesis. The amputee should be able to just touch the heel tip to the ground.
- If the heel touches too easily the foot module is too soft and conversely if too difficult, the foot module is too stiff. The foot module category should be exchanged with one category higher or lower based on the results.

Warnings and Contraindications

No specific warnings and/or contraindications are specified for this device, although they should be used for the assembled prosthesis. These include, but are not limited to:

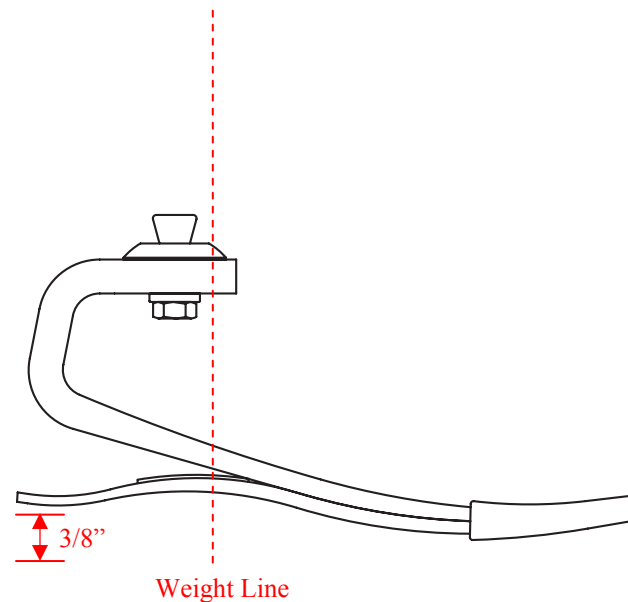
- Discontinue use, and consult your physician or prosthetist if the prosthesis causes pain, or injures you in any way.
- Do not attempt to adjust or service the prosthesis, except as advised by your prosthetist.
- Inform your prosthetist if you lose or gain a significant amount of weight.
- Have the prosthesis serviced at the regular intervals specified by the prosthetist.
- Ensure that the prosthesis is used in a shoe with the correct heel height. Defender™ feet are designed to work with a 3/8 inch heel. They will not perform as intended, and the footshell will wear in an accelerated manner, if they are worn without shoes.
- Freedom Innovations' feet are manufactured and tested for a particular weight and activity level. Use by an amputee other than the one for whom they were originally manufactured may be dangerous to the amputee, and shall void any written or implied warranty.
- Never attempt to loosen the bolt affixing the pyramid attachment.

Maintenance and Disinfection

- Freedom Innovations' foot modules should be inspected and serviced every six months, or as advised by the prosthetist.
- The foot may be cleaned and/or disinfected with soap and warm water. If the foot is used in water, or extremely dirty environments, it is advisable to remove the footshell to clean and disinfect the interior of the shell.



Advena Ltd., Hereford, HR4 9DQ UK



Pediatric Defender™ Prosthetic Foot

Instructions for Use

R-720-062 Defender, Prosthetist's Instructions, Rev. C

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Pediatric Defender Prosthetic Foot

Bench Alignment

Sagittal Plane:

- Introduce the appropriate socket flexion and heel height, according to the amputee's requirements.
- Position the weight line, taken from the center of the socket at the patellar tendon level, so that it falls along the anterior edge of the pylon.

Coronal Plane:

- Introduce the appropriate socket adduction/abduction, according to the amputee's requirements.
- Position the weight line, taken from the center of the socket at the patellar tendon level, so that it falls along the midline of the foot module in a neutral M-L position. Set toe-out as appropriate

Static Alignment

- Fit the anatomical foot cover onto the foot module and place into shoe. Use heel wedges to ensure that the weight line falls along the anterior edge of the pylon with shoe in place.
- Establish the correct height of the prosthesis by having the amputee stand with feet at shoulder width, and equal weight bilaterally.
- Check socket flexion, load line position and toe-out. Correct as necessary.

Dynamic Alignment

Gait:

- The function of the foot may be optimized by modifying the alignment of the socket relative to the foot and by altering heel stiffness. The heel stores energy at heel strike and progressively releases it at midstance. Careful attention to alignment will ensure optimal energy return, and improve control of the prosthesis.
- As the amputee walks, check for smoothness of gait and even ground contact at all times.
- Optimize the alignment by progressively moving the weight line anteriorly over the foot to increase heel stiffness and observing the heel to toe function.

- The heel is too soft if the foot comes to foot flat too early or the amputee feels like they are sinking or trying to climb up over the toe. The toe will feel too stiff and the knee may hyperextend. Shift the socket anteriorly and/or use foam wedges to stiffen the heel, and soften the toe.
- The heel is too hard if the amputee's gait exhibits rapid heel to toe movement and they have difficulty in controlling the prosthesis. The toe may feel sluggish with minimal energy return and the knee may buckle. Shift the socket posteriorly, or remove heel stiffening foam to alleviate this problem.
- Use Loctite T 242 (not provided), and torque pyramid adjustment screws to the manufacturer's recommendations. All screws should be re-torqued after dynamic alignment of the prosthesis.
- Freedom Innovations foot modules are manufactured to fit industry standard pyramids and receivers. It is the prosthetist's responsibility to choose and fabricate properly fitting connectors.

Altering Heel Stiffness:

- In most cases, stiffening the heel is best achieved by moving the weight line anteriorly or dorsiflexing the foot. However, the heel action may also be stiffened, by affixing the heel stiffening foam between the heel and toe portions of the foot module.
- During dynamic alignment, hold the heel stiffening foam in place by applying the double-sided adhesive strip to the bottom surface of the foam. **Moving the foam forward will soften the heel of the foot. Moving the foam towards the heel will stiffen the foot.**
- After the proper foam location has been selected, remove the temporary adhesive strip, lightly scuff the area to be glued, clean the mating surface with a solvent and apply with a permanent adhesive such as Barge Cement (not provided). Do not glue the upper portion of the stiffening foam to the shank of the foot, as this will affect foot performance and lead to eventual failure of the stiffening foam.

Verifying Foot Module Category:

- The foot module category may be verified using a simple method to check toe deflection. Instruct the amputee to stand in parallel bars with the knee bent to 30 degrees, and toes of the prosthesis even with the heel of the sound limb.